

Appl. No. 10/635,249
Docket No. 8556C
Amdt. dated October 25, 2007
Reply to Office Action mailed on September 7, 2007
Customer No. 27752

REMARKS

Claim Status

Claims 12-14 and 16-20 are pending in the present application. No additional claims fee is believed to be due.

Independent claims 17 and 19 are amended herein. In particular, claims 17 and 19 are amended to recite a temperature change substance responsive to contact with urine to absorb heat. (emphasis added). Support for these amendments is found at page 9, lines 3-4 of the specification. As such, it is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

Allowable Subject Matter

Claims 12-14 and 16 are allowed.

Rejection Under 35 U.S.C. § 103

In the Office Action, claims 17-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,236,428 to Zajaczkowski (hereinafter “Zajaczkowski”) in view of U.S. Patent No. 5,277,180 to Angelillo et al. (hereinafter “Angelillo”) and U.S. Patent No. 5,167,655 to McCoy (hereinafter “McCoy”). In order to establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (*See MPEP § 2143*). There is at least one aspect of the invention defined by independent claims 17 and 19 not taught or suggested by the combination of Zajaczkowski, Angelillo, and McCoy.

Zajaczkowski discloses an absorbent article having a primary absorbent member 12 and an auxiliary absorbent member 14, which includes a topsheet 44 positioned on top of an auxiliary absorbent means 42. (*See Col. 2, ll. 59-61; Col. 4, ll. 52-56; and Fig. 1*). The Office Action characterizes the auxiliary absorbent means 42 of Zajaczkowski as the temperature change substance recited in claims 17 and 19. The Office Action also

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acknowledges that Zajaczkowski does not disclose a temperature change substance having a negative heat of solution as recited in claims 17 and 19. The Office Action then cites Angelillo as teaching an absorbent pad with an endothermic thermal pack and McCoy as teaching a wearable undergarment comprising a cold therapy pack.

Applicants disagree with the Office Action's characterization of the auxiliary absorbent means 42 of Zajaczkowski as the temperature change substance recited in the pending claims. Nevertheless, claims 17 and 19 are amended to further define the temperature change substance by reciting that the temperature change substance is responsive to contact with urine to absorb heat. Angelillo discloses an absorbent pad and a thermal source for absorbing liquid discharged from a patient. (*See Abstract*). In contrast to the temperature change substance recited in claim 17, the thermal source disclosed in Angelillo comprises a flexible liquid impermeable container containing a chemical mixture. (*See Col. 6, ll. 56 to Col. 7, ll. 3*). The mixture undergoes a thermal reaction upon the mixing of two chemical substances. (*See Col. 6, ll. 56 to Col. 7, ll. 3*). As such, the thermal source of Angelillo is contained within a liquid impermeable container and requires a mixing of chemicals contained within the liquid impermeable container to enable a thermal reaction to take place. (emphasis added). McCoy discloses a cold pack preferably enclosed in a plastic bag, which may be inserted into a panty. (emphasis added). (*See Col. 4, ll. 9-12*). McCoy discloses that the cold pack may be any type of pre-cooled gel or the like. (emphasis added). (*See Col. 3, ll. 26-28*). It is therefore submitted that the liquid impermeable bag of chemicals disclosed in Angelillo and the pre-cooled gel disposed in a plastic bag disclosed in McCoy are not the same as a temperature change substance having a negative heat of solution and being responsive to contact with urine to absorb heat, as recited in claims 17 and 19. (emphasis added). Thus, the combination of Zajaczkowski, Angelillo, and McCoy does not teach or suggest the temperature change substance recited in claims 17 and 19.

Further, in support of the claim rejections, the Office Action merely asserts, while providing no analysis, that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with

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no change in their respective functions. (emphasis added). As discussed above, the Office Action has not combined known elements equivalent to the temperature change substance with other known elements in the manner recited in claims 17 and 19. Even if the Office Action had combined elements known in the prior art, the Office Action has not shown why it would have been obvious to combine such elements in the manner as claimed. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. (See *KSR International v. Telexfex Inc.*, 127 S.Ct. 1727, 1741 (2007)). It can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to interrelated teachings of multiple patents; to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art. *Id.* at 1740. To facilitate review, this analysis should be made explicit. *Id.* (emphasis added). The Office Action has not provided an explicit analysis as to the apparent reason to combine known elements in the way recited in pending claims. (emphasis added).

As disclosed in the present application, the temperature change element of the absorbent article provides a cool/wet signal when wetted which causes discomfort to the wearer. (*See inter alia* Abstract). The temperature change element comprises a temperature change substance disposed on an impermeable material in order to maximize the thermal signal provided to the skin of the wearer. (emphasis added). (*See inter alia* Abstract). The structure recited in the claims achieves the aforementioned function. However, the Office Action provides no analysis as to how or why it would be obvious to modify the functions and structures of the cited references and combine them in the same manner as recited in claims 17 and 19.

As previously mentioned, the Office Action equates the auxiliary absorbent means 42 of Zajaczkowski with the temperature change substance recited in claims 17 and 19. The function of the auxiliary absorbent means of Zajaczkowski is to increase absorbent

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capacity. (*See Col. 1, ll. 14-20.*) In contrast to the temperature change substance recited in the pending claims, the auxiliary absorbent means of Zajaczkowski would function to absorb and move urine away from a wearer, as opposed to maximizing a thermal signal provided to the skin of the wearer when wetted. The Office Action also points to Angilillo as teaching an absorbent pad with an endothermic thermal pack and points to McCoy as teaching a wearable undergarment comprising a cold therapy pack. The thermal source (comprising a liquid impermeable bag containing chemicals) of Angelillo functions in conjunction with an absorbent bandage to provide cooling or heating to a recovering area of a patient (*See Col. 1, ll. 38-40*), and the cold pack (comprising a pre-cooled gel in a plastic bag) of McCoy functions in conjunction with a panty to provide cold therapy to the crotch area of a wearer. (*See Abstract*). In contrast to the temperature change substance recited in the pending claims, the chemicals or gel contained in liquid impermeable and/or plastic bags of Angilillo and McCoy would not be responsive to contact with urine to absorb heat. As such, it is submitted that it would not have been obvious (and the Office Action has provided no reasoning or motivation along with an explicit analysis) to modify the function and structure of the absorbent means of Zajaczkowski, the thermal source of Angilillo, and the cold pack of McCoy to be the same as the temperature change substance having a negative heat of solution and being responsive to contact with urine to absorb heat, as recited in claims 17 and 19.

Applicants also maintain that the “temperature change element” recited in claims 17 and 19 is a structural element. This is evidenced by the recitation in claims 17 and 19 that the “temperature change element” comprises other structural elements. In particular, the temperature change element of claim 17 comprises a permeable layer having a body facing surface and a temperature change substance disposed on the permeable layer, as well as an impermeable layer partially wrapped around the permeable layer.” In addition, claim 19 recites that each of the temperature change elements comprises a permeable layer having a body facing surface, an impermeable layer formed by the barrier leg cuff, and a temperature change substance disposed on the permeable layer. As such,

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Applicants respectfully disagree with the Office Action's interpretation of the term "temperature change element" as being a functional limitation.

Claim 17 also recites an impermeable layer partially wrapped around the permeable layer such that longitudinal edges of the impermeable layer stop short of meeting, leaving a center portion of the body facing surface of the permeable layer exposed. The Office Action characterizes the lower surface 28 of Zajaczkowski as the impermeable layer recited in claim 17. Zajaczkowski discloses that the auxiliary absorbent member 14 includes a lower surface 28, which in Figure 1 is illustrated as having a length substantially coextensive with primary absorbent member 12 and a width corresponding to the distance between the opposite elastic gathers. (*See Col. 3, ll. 58-62*). For clarity, Figures 1 and 2 of Zajaczkowski are reproduced below with reference numbers of particular interest being circled.

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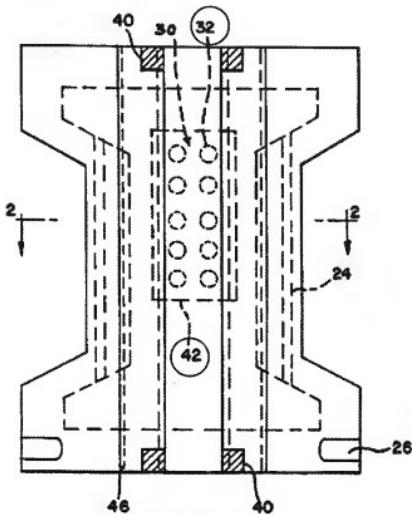


FIG. 1

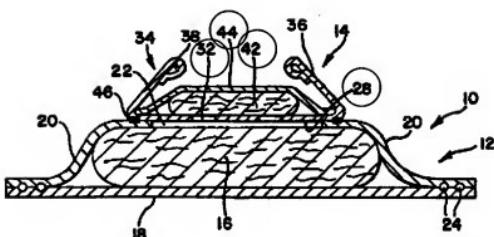


FIG. 2

Zajaczkowski discloses that lower surface 28 contains a liquid-permeable region 30 which in this particular embodiment comprises a plurality of holes 32 provided in the otherwise liquid-impermeable lower surface 28. (*See Col. 3, ll. 62-66*). In another embodiment, Zajaczkowski discloses a lower surface 128 having a central opening to define a liquid-permeable region 130. (*See Col. 5, ll. 22-25*). In yet another embodiment, Zajaczkowski discloses a liquid-permeable region 230 comprising a liquid-permeable fibrous sheet. (*See Col. 5, ll. 40-42*). As such, Zajaczkowski does not teach or suggest the impermeable layer of claim 17.

Claim 19 also recites that the temperature change elements are disposed on the barrier leg cuffs. The Office Action characterizes elements identified by reference numbers 42, 142, and 143 in Zajaczkowski as the temperature change elements recited in claim 19. See Figure 2 of Zajaczkowski reproduced above, and Figures 3 and 4 of Zajaczkowski reproduced below with reference numbers of particular interest being circled.

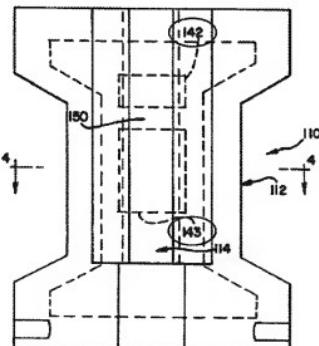


FIG.3

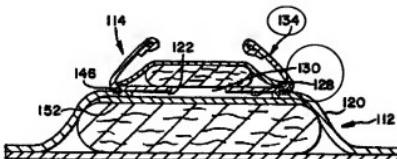


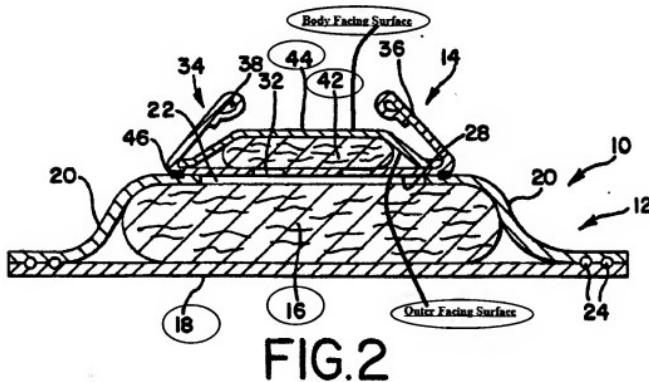
FIG.4

Zajaczkowski identifies reference number 42 as an auxiliary absorbent element and identifies reference numbers 142 and 143 as separate absorbent elements which are longitudinally spaced to each other. (See Col. 4, ll. 35; Col. 5, ll. 15-20; and Figs. 2 and 3). Zajaczkowski also identifies reference numbers 34 and 134 as standing leg gathers. (See Col. 4, ll. 19-26; Col. 5, ll. 27-31; and Figs. 2 and 4). As shown, the absorbent elements 42, 142, and 143 are disposed between the topsheet 44 and the lower surface 38. The absorbent elements 42, 142, and 143 are disposed underneath the topsheet 44 and spaced below the leg gathers 34 and 134. However, Zajaczkowski does not teach or suggest the absorbent elements 42, 142, and 143 as being disposed on the leg gathers 34, 134.

Thus, for at least the reasons discussed above, it is believed that claims 17 and 19 are patentable under 35 U.S.C. § 103(a) over Zajaczkowski in combination with Angilillo and McCoy. Claims 18 and 20 depend from and include all the limitations of independent claims 17 and 19, respectively. As such, for at least the same reasons discussed above with reference to claims 17 and 19, claims 18 and 20 are patentable under 35 U.S.C. § 103(a) over Zajaczkowski in combination with Angilillo and McCoy.

Dependent claim 18 also recites additional structure details that further distinguishes claim 18 over the cited references. In particular, claim 18 recites that the temperature change substance is disposed on the body-facing surface of the permeable layer in parallel regions covered by the longitudinal edges of the impermeable layer.

(emphasis added). As discussed above, Zajaczkowski discloses a topsheet 44 positioned on top of an auxiliary absorbent means 42. (*See Col. 2, ll. 59-61; Col. 4, ll. 52-56; and Fig. 1.*) Zajaczkowski also discloses a primary absorbent member 12 that includes a backsheet 18 positioned on the side of primary absorbent panel 16 which defines the outer surface of primary absorbent member 12. (*See Col. 3, ll. 11-14.*) In addition, Zajaczkowski discloses that the auxiliary absorbent member 14 further includes a liquid-permeable facing or topsheet 44 positioned on top of auxiliary absorbent means 42, with topsheet 44 being adapted for positioning adjacent to the wearer of absorbent article 10. (*See Col. 4, ll. 52-56.*) To help illustrate the aforementioned structure, Figure 2 of Zajaczkowski is shown below with reference numbers of particular interest being circled and with the topsheet being labeled to show the location of a body facing surface and an outer facing surface of topsheet 44.



As discussed above, the Office Action characterizes the auxiliary absorbent pad 42 of Zajaczkowski as the temperature change substance of claim 18 and characterizes the topsheet 44 of Zajaczkowski as the permeable layer of claim 18. However, as shown above, the auxiliary absorbent pad 42 of Zajaczkowski is not disposed on body facing.

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surface of the topsheet 44. (emphasis added). In contrast to the structure recited in claim 18, the auxiliary absorbent pad 42 of Zajaczkowski is disposed on the outer facing surface of the topsheet 44.

With regard to claim 18, the Office Action asserts that Zajaczkowski teaches a permeable layer 44 having a body-faceable surface, and that this layer is capable of being positioned such that either flat surface can face a human body. (emphasis added). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. (See MPEP 2143.01(VI)). Here, in order for the outer facing surface of the topsheet 44 to face the wearer as the Office Action proposes, the absorbent article of Zajaczkowski would have to be worn inside out, which in turn, would change the principle of operation of the absorbent article of Zajaczkowski.

With regard to claim 20, the Office Action, while referring to Figure 2 of Zajaczkowski, asserts that Zajaczkowski teaches a temperature change substance 42 disposed between the permeable layer 44 and the leg barrier cuff (28, 36). The Office Action's assertion and characterization of Zajaczkowski is incorrect. Zajaczkowski identifies reference number 28 as the lower surface, and identifies reference number 36 as a substantially liquid-impermeable flap. (See Col. 3, ll. 58-66; and Col. 4, ll. 11). As shown in Figure 2 of Zajaczkowski (reproduced above), the auxiliary absorbent pad 42 is disposed between the topsheet layer 44 and the lower surface 28, and is not disposed between the substantially liquid-impermeable flap 34 and the topsheet layer 44. (emphasis added).

For at least the reasons provided above, it is believed that claims 17-20 are in form for allowance and such indication is respectfully requested.

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Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejections of the claims. Early and favorable action in this case is respectfully requested.

Respectfully submitted,

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Date: October 25, 2007
Customer No. 27752
(Amendment-Response to Office Action.doc)
Revised 11/17/2006